

S/N: 10/063,300

Atty Dkt No. EME-1416 PUS / 200-1759

1. (Amended) A method of applying a solder filler to an aluminum body part, said method comprising the steps of:

applying a fluxing agent in paste-like form to the aluminum body part;
heating the applied fluxing agent to deoxidize the surface of the aluminum body

A1 part;

applying a tin- based solder filler to the deoxidized surface of the aluminum body part, the melting point temperature of the solder filler being at least 100 degrees C lower than the melting point temperature of the aluminum body part and the tin- based solder filler consists of, by weight, of 81% to 85% Sn, 3% to 5% Zn, and 12% to 14% Cu; and
heating the solder filler to bond the solder filler to the aluminum body part.

6. (Amended) The method of claim 21 wherein the solder filler consists of, by weight, 66.5% Sn, 30% Zn, and 3.5% Ni.

A2 7. (Amended) The method of claim 22 wherein the solder filler consists of, by weight, of 80% Zn and 20% Al.

11. (Amended) A method of applying a solder filler to an aluminum body part comprising the steps of:

A3 forming a filler/flux mixture comprising a tin-based solder filler for aluminum body parts and a fluxing agent wherein the melting point temperature of the solder filler is at least 100 degrees C lower than the melting point temperature of the aluminum body part and the tin-based solder filler consists of, by weight, of 81% to 85% Sn, 3% to 5% Zn, and 12% to 14% Cu;

applying the filler/flux mixture to the aluminum body part; and

heating the filler/flux mixture to bond the solder filler to the aluminum body part.

A4 17. (Amended) The method of claim 11 where in the filler/flux mixture is comprised of by weight about 10% of the fluxing agent and about 90% of the tin-based solder filler.

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Please add claims 21-23 as follows:

21. (New) A method of applying a solder filler to an aluminum body part, said method comprising the steps of:

applying a fluxing agent in paste-like form to the aluminum body part;
heating the applied fluxing agent to deoxidize the surface of the aluminum body

part;

applying a tin-based solder filler to the deoxidized surface of the aluminum body part, the melting point temperature of the solder filler being at least 100 degrees C lower than the melting point temperature of the aluminum body part and the tin-based solder filler consists of, by weight, of 55% to 85% Sn, 12% to 40% Zn, and 3% to 5% Ni, Fe, Cu or Co;
and

heating the solder filler to bond the solder filler to the aluminum body part.

22. (New) A method of applying a solder filler to an aluminum body part, said method comprising the steps of:

applying a fluxing agent in paste-like form to the aluminum body part;
heating the applied fluxing agent to deoxidize the surface of the aluminum body

part;

applying a zinc-based solder filler to the deoxidized surface of the aluminum body part, the melting point temperature of the solder filler being at least 100 degrees C lower than the melting point temperature of the aluminum body part and the zinc-based solder filler consists of, by weight, of 78% to 89% Zn and 11% to 22% Al; and

heating the solder filler to bond the solder filler to the aluminum body part.

23. (New) The method of claim 11 wherein the forming step is comprised of providing the tin-based solder filler in the form of a hollow wire and injecting the fluxing agent into the hollow wire.
